

The National Geographic Magazine

AN ILLUSTRATED MONTHLY



Editor, JOHN NYDÉ

Associate Editor

A. W. GREENLY

W. J. MCGEE

HENRY GAMMELL

C. HART MERRIAM

ELIZA HUHMAN BODMORE

CONTENTS

	PAGE.
THE SOURCES OF THE MACKENZIE RIVER With map and illustrations	WALTER D. WILCOX 113
EXPLORATION IN THE CANADIAN ROCKIES	129
HOW LONG A WHALE MAY CARRY A HARPOON	WM. H. DALL 136
SHIPBUILDING IN THE UNITED KINGDOM IN 1890	139
Geographic Litigation, p. 139; Proceedings of the National Geographic Society, p. 143; Major and Hornblower, p. 144	

ADVERTISING

ADVERTISING FOR THIS MONTH'S GEOGRAPHIC MAGAZINE

Advertiser's Name _____

1000 Fifth Avenue, New York. 1000 Broadway, 1000 Madison Avenue,
216 Vesey Street, Clinton 1000 Broadway, New York.

Price 25 Cents

\$2.50 a Year

THE National Geographic Society

PRESIDENT

ALEXANDER GRAHAM BELL

Vice-President

W. J. MORSE

Board of Managers

CHARLES J. DILL,
WILLIAM H. DALL,
DAVID E. DAY,
THOMAS G. COOK,
H. S. FREDERICK,
ELIZA H. SCOTTMORE

MARCUS BAKER,
HENRY V. COOPER,
F. V. COVILLES,
W. G. COOPERMAN,
WILLIS L. DODGE,
W. R. POWELL,

A. GRAHAM BELL,
HENRY CANNETT,
A. W. GRIZELLY,
JOHN HYDE,
W. J. MORSE,
F. H. NEWELL

Editor

HENRY GANNETT

Managing Secretary
F. H. NEWELL

Corresponding Secretary
ELIZA ROHAMAN SCOTTMORE

SECRETARY'S OFFICE

Rooms 107-108, Corcoran Building, Fifteenth and F Streets N. W., Washington

TREASURER'S OFFICE

U. S. Geological Survey, 1330 F St. N. W., Washington

National Geographic Magazine—Back Numbers

The Society is prepared to purchase Vols. I, II, III, and IV, or Nos. 2 and 4 of Vol. I, 2 and 3 of Vol. II, 1, 3, 5, and 6 of Vol. IV, and 6 of Vol. VII. Members or subscribers having these volumes or single numbers to dispose of are requested to communicate with the Secretary.

SCENE OF THE LITTLE FORK OF THE LITTLE COLUMBIA



THE
National Geographic Magazine

VOL. X

APRIL, 1890

No. 4

SOURCES OF THE SASKATCHEWAN

By WALTER D. WILCOX

The Saskatchewan, one of the larger rivers of North America, takes its source in the rugged fastnesses of the Rocky mountains, and flows eastward over the sparsely inhabited plains of southern Canada till it reaches Lake Winnipeg. Save for a rapid at its mouth, the river is navigable for steamboats for about 1,600 miles. Strangely enough its two chief branches come from the same ice-fields in the high Rockies, and after diverging several hundred miles unite far out on the rolling plains about 200 miles from their source.

From the Canadian Pacific railway the easiest way to reach the headwater tributaries of the Saskatchewan is by ascending the Bow river to its source. My friend, Mr. R. L. Barrett, and I left the station of Laggan on July 12, 1889, bound northward, in the hope of reaching the Athabasca pass and measuring the height of Mt. Brown and Mt. Hooker. For such an extensive journey, which would require two months to accomplish, we had five saddle-horses and ten pack-horses to carry our provisions and camp necessaries. To manage the horses and arrange our camp we engaged two skilled packers, Tom Lusk and Fred Stephens (the latter an expert axeman) and also a cook.

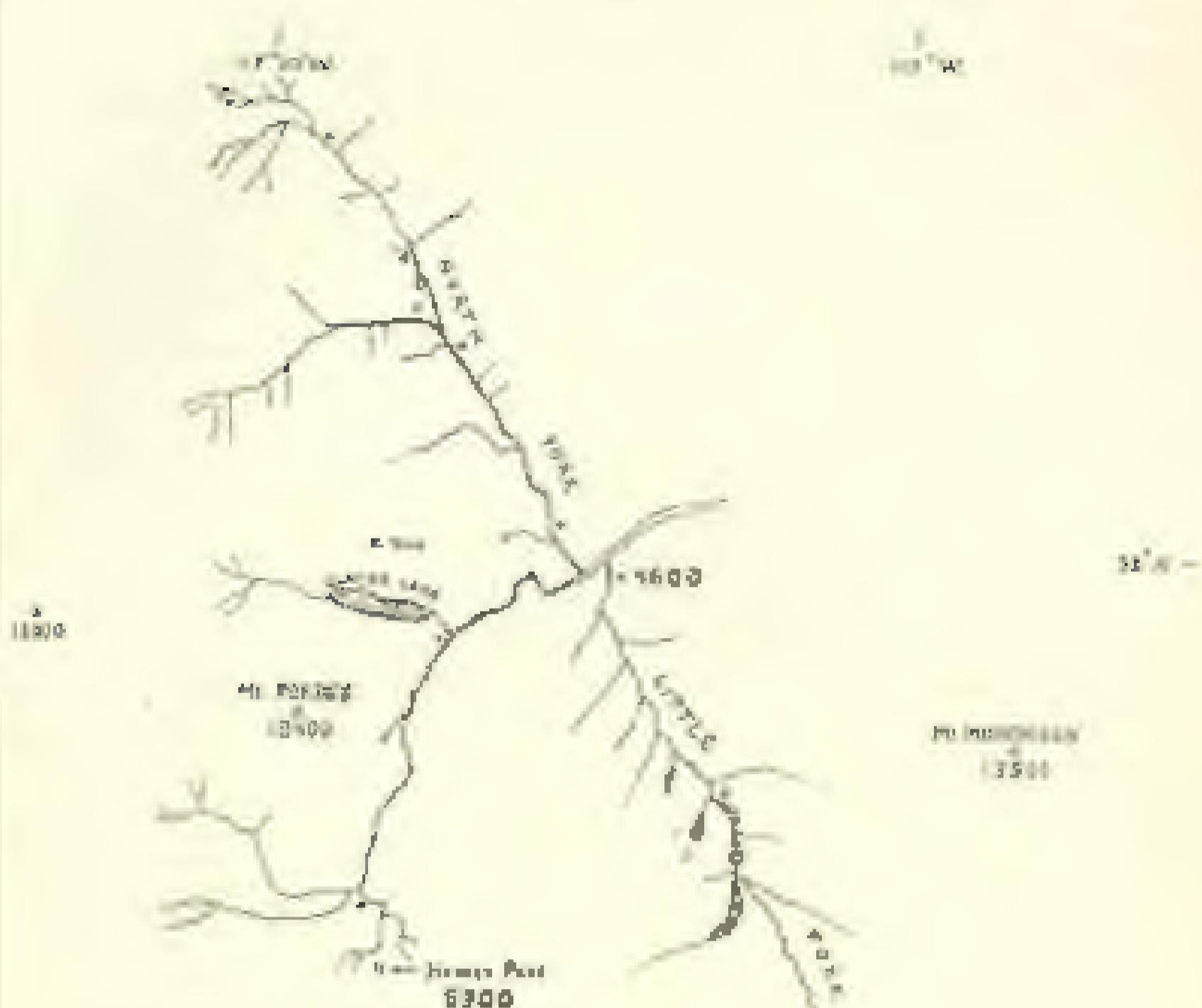
On the third march from civilization we came to the upper Bow lake, which is about 20 miles from the railroad. This lake, though only four miles long, has fine surroundings, being closely pressed by grand precipices hung with ice and frequently echoing to the thunder of avalanches, while its indented shores and green forests make it one of the most attractive spots in the

Rockies. A muddy stream descends from a glacier beyond the head of the lake and pollutes its clear waters, while a trout brook comes from an upland valley lying to the northwest, and this latter stream is perhaps the true source of the Bow. Up the valley countless springs and melting snowbanks, with large tracts of swampy land, contribute their waters from every side. The level of the valley rises into a gently sloping plain, the last rivulet is passed, and one stands on the divide overlooking the Little Fork of Saskatchewan river.

Those who have reached this region have had an opportunity of seeing one of the grandest views that the mountains offer. Far to the west are the lofty peaks of the highest range of the Canadian Rockies, buried in perpetual snow and discharging their surplus ice by glaciers in every lateral valley. Deep set amid dark precipices, such a glacier is to be seen west of the pass. From two enormous ice-tunnels a large stream issues and sweeps in a fervent course over a barren gravel-wash for a mile or more, till it enters a lake. Then, as the clear stream leaves the lake and winds away to the northwest, it is lost to view, hidden amid deep forests, and only reveals its course here and there where it expands into one or another of the many lakes which this valley contains. Between the spur of the summit range on the west and a parallel range on the east, the great trough or valley which carries the Little Fork and the North Fork of the Saskatchewan draws away in a nearly straight line for more than 60 miles, till it is lost in the blue haze of distance.

The summit of the pass is a delightful region, situated at an altitude of 6,700 feet, or only 300 feet below tree-line. The woodland is consequently rather open and abounding in meadows, while the spruce trees, many of which must be four or five centuries old, have that symmetrical beauty of form rarely seen where there is less space and light in the crowded forests of the deep valleys.

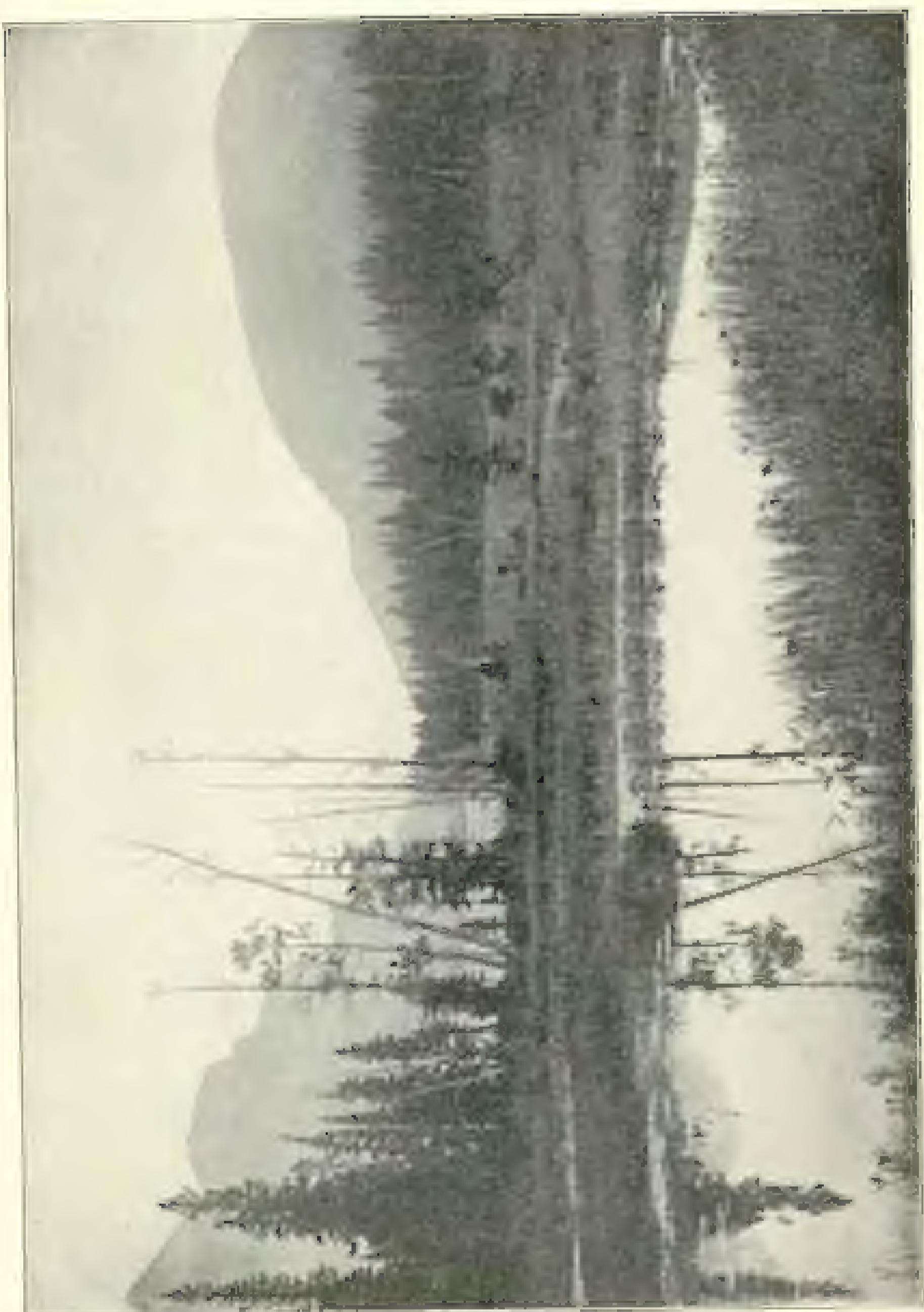
It seemed best to camp on the summit, as a forest fire had broken out in the Little Fork valley some miles distant and was sweeping furiously up the mountain to the east. Mr Barrett and one of the packers spent the next day in making a horseback excursion to investigate the extent of the fire and see if there was a way through. They returned in the evening, after a hard day's travel, without having reached the fire. It was evident that the distance had been much under-estimated, perhaps owing to the great extent of view from the pass; but it was



SKETCH

THE RIVER OF THE
SASKATCHEWAN
 HIGH & BIGHORN 12,500'
 BY
WALTER D. WILCOX

SCALE OF MILES
 0 1 2 3 4 5 6 7



THE BOSTONIAN, JULY 18, 1863.

small comfort to know that the fire was farther off than had been supposed, as we had to change our idea of its magnitude. As there was nothing to be gained by waiting, we moved in short march into the valley the next day.

The descent into the Little Fork valley is much steeper than on the other side of the pass, and in the first three miles the trail drops about 1,000 feet. These mountain trails were used by the Indians long before the whites came into the country. In every important valley, especially where game abounds, there are trails which prove of great value to the traveler.

As our horses were winding through a deep forest, a bird appeared which resembled a pine Babbler, flitting from tree to tree and following us closely. Somewhat later it gave the most remarkable instance of tamelessness that I have ever seen. Having followed us for about two miles, it waited in a tree during the bustle and confusion of making camp, but in the afternoon, when all was quiet and some of our men were asleep, the bird became exceedingly familiar, walking on the ground near us and finally perching on our extended hands. It was soon evident that the object of our visitor was to catch mosquitoes, which were hovering in swarms around our heads. It pecked at a ring on my hand, at our needles, and in fact any metal article, but the climax was reached when by accident the bird saw its own image in a small looking-glass which lay on the ground. Then, with extended wings and open bill, it uttered cries of rage and pecked madly at the glass in which an enemy appeared. Among the solitudes of mountain forests, squirrels, turkeys, and whiskey-jacks often show unusual confidence in man, but this particular instance is exceptional, because the bird would alight on our persons even after it had been momentarily though gently detained several times as a prisoner in my hand.

Further investigation showed that it was possible to get our horses through the fire, which had spent its energy on a large extent of green timber, so after three hours' travel from camp we came to the burning trees, where the fire was advancing slowly, as there was a calm. Then came several miles of the recently burned area, now changed to a forest of blackened sticks, some of which were already fallen, with here and there a column of smoke rising from smoldering trees, and everything half concealed in a snowy covering of ashes. At the other edge of the fire there was more danger, and frequently some tree would flash up and send a scorching heat toward us. We were chiefly an-

ious that the pack should not take fire and cause a stampede among the horses, so far a considerable distance we drove our animals along the edge of a lake and frequently waded deep in the water to avoid the heat of blazing trees.

After an exhausting march of six hours we made our camp in a meadow, or swamp, about half a mile from the fire. The wind, however, which had been increasing for a time, began to carry the fire toward us, and our situation soon became alarming when some heavy timber began to blaze and the columns of flame, shooting hundreds of feet into the air, made a terrifying roar, which caused our horses to stop feeding. At one time a funnel-shaped whirlwind about 200 feet high formed over the heated area and remained there a few moments.

At the rate of progress the fire was making, we should soon have been surrounded had we not packed up and moved a mile further down the valley. The second camp was made by the side of a considerable stream, wide enough to stop the fire, but toward evening cloud banners began to form at the peaks of the mountains, and next day, after many weeks of drought, rain fell steadily for ten hours and fortunately extinguished for a time the fires that were destroying this beautiful valley.

We were now two days' journey down the Little Fork valley, a distance of about 18 miles in a straight line. We remained in camp the next day to do a little survey work from a mountain to the east. From this point, at an altitude of 8,000 feet, the Little Fork valley appears straight, deep, and comparatively narrow, with a number of lateral valleys coming in from the west side and cutting the mountain masses into projecting spurs. The crests of the mountains are for the most part nearly horizontal, and the cliffs are frequently almost vertical. There were six lakes in view from our survey point, of which two, each about a mile long, were merely expansions of the river, three were in lateral valleys, and one lay far up the valley where the river takes its source. The lateral valleys lead to the summit range to the west and probably have never been visited.

The country is very grand near the lakes. A striking peak about 10,000 feet in height, with a precipitous rock face and wedge-shaped summit, stands guard, and, together with the jagged mountains near it, helps to give a gloomy, fiord-like appearance to the region. Mt. Macpherson is supposed to lie in a group of mountains to the east of this place, and, as seen from the Pipestone pass by Dr. Hector, was estimated to be 13,000

feet. It has never been seen from the Little Fork valley, though it is not a great distance.

It is 22 miles long and six broad and reaches moderate river. The current is very great, and runs for many miles to the east of the Athabasca, or, especially in the great valley of the Saskatchewan. At the lower junction the Saskatchewan is a rapid stream, about 150 yards wide and 15 feet deep, and the upper or upper waters of the Little Fork are seen but for a short distance below one of the falls in river. The Saskatchewan, which is about four miles wide at this point, the river itself flowing between the 1/2 of a mile to the left, and 1/2 of a mile to the right, is about 100 feet high, there being no falls in passing. It has been seen of this distance. The river then turns south northeast, cutting through the mountain range, and taking its course to the small sheet among the highest peaks of the mountain range.

Very large tributary, which we called the "North Fork," enters it from the northwest about 1/2 a mile from the junction of the two rivers. This river is the correct place

of the name, as it was the only available information to a native Indian who tried to repeat. Even Stony Indians who travel through these mountains know little of this river, because, it is said, many years ago one of their tribe was lost while hunting in that region, and they think he was destroyed by an evil spirit there. At all events, they will take no chances in going up a part of that country to it.

Our course to the Athabasca, however, lay in the river, so our first duty was to find a ford across the Saskatchewan. A day was spent in finding a safe place, as the river was a summer stream, but at the highest stage. At length, with a chance

the river showed out a point, and said this is to the width of nearly half a mile.

A scene of rushing water followed the next day, after fording the turbulent Little Fork, we had crossed the main river which is of great size at this point, may all in sea from its most distant origin, and were safely on the north side. Turning northward along a high bank, we came in a short time to the North Fork which appears here and there as a small stream or branch of the main river. At this point, above its mouth, the North Fork flows between rocky banks and there is a fall of rapids in a constituted channel, which is impeded (upstream) of several of which the water surges



the first day, and the first night we had a hard rain, so we had to
cancel our walk, and it was dark when we got back. We had
a good time though, and we were so tired we fell asleep in the
car on the way home. I think we had a great time, and we were so happy
and excited to go to the beach for a while and we were so happy
and excited to go to the beach for a while and we were so happy

Ch. 6: Bivariate Distributions and Marginal Distributions

cal ex, but as a (and w) were & here we are given to, friends, but still
the p & such a & y friend until it is further strengthened. We can
now & we will now be along a steep bank of the river a park
where it is said the old stone bridge still stands in a deep
valley. The horses are now very much given to doubt, & it is
evident they are afraid of the inundation of the river. It
will be odd to the horses to have the old stone bridge in the
old N. Y. go between. However as the river rising will not be
in a slight depth, very many tanks are to be made here & there

On to 2000' on the north-trail from the west on the side the
North Park. As I often situate our outfit on the side we
were at a loss to know where to go in order to reach the Atlantic
limestone. In order to get to the extensive valley of the Colorado,
a descent was made of a mountain which lies between the two
rivers. On the south is the high side of 5,000 feet. It was
sunk at the northern edge, where, it seems, is a large plateau
at 12,000 feet. A descent on it when off trail is well
given but not so easy, but I must confess that I do
not know about it. It is higher than of any other side of the basin
but I would not hazard it. As a result of this descent we were
on the high side of the trail route. I did not run up the western
bank of the. The eastern valley however seems exceedingly steep
canyon like in topography. For instance just it was to go up this
through the a pass say from forest floor to a space of 1000 feet
above me went up of late. I met some Indians but while I
ran past them but when the trail, a long way back, I got a plate
lunch, the same word flew into my mind. Verano I took it with a
of the rough limestone to be. The most interesting parts, but strong
against them, for nearly 1000 and while the trail was not
so the were a few. With a tool I was current for such use the
on the plateau was not more than a tenth from home but the
I let slide it up later in the trip. The trail continued on the
even days. It is reported that there was a storm in the deep valley
the night of

It is not the days we pass in idleness, or yesterdays, or to-morrows, or the last days of the trail, the rough paths of the forests, or the repeated crossings of the river. Our progress was slow in spite of the ease of moving, or the care paid to it, but out on the trail for the next day as far as possible each afternoon to the river the river is still a condition of a narrow valley, or a broad basin, a smooth prairie, covered with herbage, a great number of trees, clinging to the edges, streams and springs running far and wide covered with delicate shrubs, or stony crevices, but waterfalls, small though, to be seen every ten rods. The head of geyser waters sweep over the prairie, so as to divide it into a series of little basins, springing from crevices to be a tributary of the valley of the West, or a small stream of its own, the West. This is the first of the passes, and is crossed by a bridge, the bridge is most constantly used. There are no boats in the general trail, or road, but along the river waters and with every step that our horses are over it, we are most uncertain. In spite of the best judgment and care of our packers, horses get beyond their depth several times, and to great danger. As the pack horses are guided by others, very many times the driver, with his packtrain, is left to follow, to assist, and to carry the说话 of the master. The power of the packers' horses and often after the river is crossed, we have to wait, and to go up to a deep water. In geyser waters, about a long jump below, laden with contents of sand, and all the dirt and filth of the horses. But even for the success of a crossing, there is a large quantity of provisions to last the horses, and it is not far with these to get into a difficulty. The horses are not strong, and the driver is a creature paralytic to their muscles very quickly.

The trail at length leaves the river and makes a rapid sweep through forests on the east side of the valley, so that in half an hour we have gained 1,000 feet. Through the trees we can see glances of an adjacent valley, the valley of the North Fork, but the timber here is so heavy, and so many of them fall to the west, that we can see but the eastern end of the adjacent valley. The North Fork was rapidly descending into the valley. The soil of the mountain is thin, so thin as to be scarcely visible, but the vegetation is as

way, the splendid green grass, the great height, and the tremendous grandeur of the mountains, so high, all help to make our surroundings most impressive. Along the south of



wind about, but there was presently from the right a watercourse, the head of which we saw a large stream of water, probably a tributary of the Colorado, which was passing just below in the valley. It seemed to have a great head, and to be of considerable size, but it was very shallow, and the water was not more than a few inches deep. It was evidently a tributary of the Colorado, and it was probably a small stream.

We followed it a short distance, and then followed the valley of the Colorado, which was about two miles to the west of camp. Near our former camp was the river which at a place of a comparatively small elevation of about one thousand feet above the level of the sea, had

cut off a neck, so as to form a narrow neck to the west of camp. From it a right branch passed northward for five miles to the north, and the other more easterly, and it turned to the north-west. The valley to the west was more extensive. There was a large stream, which, directly before us, became the head stream of the Colorado, which supplies the greater part of the water of the Colorado River. At least six or seven miles of the Colorado may be seen to the south of camp before it disappears in the mountains. The river has been joined in on account of the great elevation of the Colorado, and it terminates.

The next day Mr. Barrett went off to camp, if possible, about the river 11,000 feet in altitude, north of our camp. He one of the parties and I started to explore the pass to the north-west, and other parties spent part of the day investigating the other passes. The condition of camp was a great saving of time. At our conference that evening, which I did not go at till midnight, we on the last train we came into camp, it was learned that the pass to the north seemed to furnish a route to the Atlantic ocean. Mr. Barrett, so far as his memory, because the memory of this information is not suggested. The pass to the north-west was more favorable, and on the next day we crossed the camp, so as to be independent of the river. The greatest elevation of the North Park range from a small place like on the side of a mountain. The snow at first in lake of a splendid and towering complex mass of rocky spires and hanging gullies.

Upon further inquiry we learned that the river was the Colorado, and the north-west was a course by which it had come into it, and it ran through a canyon which made this to a large extent out of question. A high valley on the right, however, offered the fact, and only escape for us, and after consulting Mr. Ward, who

After our present sojourn in the sun, and the interval of a week, we continued our journey down the Arkansas river, with the same party.

On the 19th of August we, part of our party, had
the necessary supplies from the market down to the Arkansas
when we were informed that the party of Mr. C. C. C. and
first party to the river had a route. To make our travel easier and
not far from the river, we were able to take this route to the
Arkansas river, but as except to find a few well timbered
up to you, I let my party in hand.

It was not until late in the season of 1855 that I had a opportunity to visit the source of the Arkansas river, or even to hear of it, so I engaged the services of James Peyle, a man who had proved very efficient on previous expeditions, and a man I did not doubt of much sense.

He selected him at first, and when he left me I was not
at all anxious about him, as I was. We set out from Lagrange
the 1st of August and our first night march through the valley
of the Arkansas river, we worked our way up, but it was very full
of water. I made a camp at noon, and the horses were
of less following a branding, and for the want of water, deep in the
upper low lake, they were forced to drink the snow. The
snow took on the third day, as a result of forced marching
during the following night there was a sudden break in the
flood, and a passing of the horses and the camp
among other miseries for a successful trip were very gloomy, reflec-
ting the loss of all gear on Lagrange. Notwithstanding
these considerations, the party went away to a destination, we
knew not in any ill way. By afternoon the horses quenched
thirst, and we were up, and on the trail. The snow was still
and it kept on the trail for miles, and only half that we had
left it unbroken, which we reached in the evening.

On October 3 we crossed the Arkansas river, and the next day
it was reported that the trail to be followed, was to be
well beaten, and easily followed. In fact the days, now gave
evidence of improvement by the appearance of a trail, it was
not long after the high water. The upper Arkansas river were
flooded in, so that the crossing night on the snow covered
summit, was very dangerous after the days of gloom and storm.
The trail, and water a few miles apart, the trail being frequently
obstructed by the river, and the snow of the winter being
prolonged, the water covering the bottom.

about five miles up the river a tiny one on the south side of the lake, and on it one of the most, on a point of land between the other two streams. The lake itself was about 1000 feet long and 400 wide at its far upper spring and a narrow ridge to be forded about 1000 feet from the lake. However it can not be denied that under the name of Glaciers one would expect to reach it. From the camp I set off in the afternoon to see the lake, and so I did until four, though not that it was a hard scramble through the snow and fallen timber. The view was well worth the effort however. The lake which is 1000 or four miles long, is broad at its high peaks, and the further it

down a general narrowing to the level. The setting sun striking it to a west of the distant mountains as pointed out by the highest peak, made clouds and tinged their edges with a golden glow. The lake was nearly surrounded by rocky ledges that jutted out into the basin of sky from the high rocky mountain slopes. The water, by reflecting from its sunnier level, took on also a twice margin of a deeper and darker and yet pretty opaque the trunks of trees carried over the lake by an old glacier. It must be instances the greatest mass ever seen to pass over the water. There was something wonderfully impressive in the sight of such a scene under the spell of evening sun.

I know what I will be asked of the necessity I decided, at a point near it to reach it, was to the sound of a high mountain that lay to the west of the lake, which from its position with a crevass and a high precipice view of the whole picture had an added interest. My purpose however was to have a view of the lake

going to Pulaski's Camp.

Accordingly I was about the camp about at nine o'clock, when I came down my way along the river for the camp. The mountain, appeared to be about 7000 feet in altitude, or in truth with 1000 feet above our camp. The sun being high it did not last long there about in the sky and I gained a full view of the top of the peak. It appeared that the Wading River had a outlet on the other side of the Glaciar lake about a mile after

I first got after passing the bridge, or river of falling trees. I entered the path, a long track in a shallow place and so the trail was continuous. It was a dry board. In less than five minutes it appeared, which saved a great deal of time for the camp went by me in getting to the lake. The trail at first led off to the east toward the mountain and went into the ridge but then turned to the west. On going that took a turn to the lake, a cutting

it you will be obliged to bring our wire along to the lakes around. I would take one of the traps out on the snow, which is over a foot in depth at 7,000 feet. At 10 a.m. and 11 a.m. last Friday of spring tides, I hauled my carabao to a bank and took a short rest, as I had been on the road very exhausted.

At 11 a.m. we left the lakes and took a road which led out into the desert. The heat and glare of the sun permitted but one place to be viewed in cloudy sky, as a host of sandy crows was drifting along over the mountains as in a great conflagration of earth and sand. It began to rain before it became hot, and the temperature fell by a degree. I soon began to have doubts of my ability to proceed in this desert, as the sun began to fall lower and no shelter could be found in the deep ravine. The houses, rocks and other characters of the ground were hidden, so that I frequently stumbled and fell. Moreover, it was evident that the sun of the morning had been hot to the intensest, for the heat as in the m. of the day caused me to feel as if I was in a furnace had been reached. The m. of afternoon were very steep and the gulls of the now returned sun to the vast expanse of snow and the intense heat of the day to sustain the agreeable temperature of the air. The desolation of darkness also, will appear to be evident. I left, however, the mountain of rock.

Moreover, the extra blinding sun weather on this or next day of the trip seemed too painful and to be lost from any lack of exertion or mind to all.

With a weary respite, I had reached a progress for a time, but soon, at the end of every endeavor for a respite and relaxation to cover the sun, the sand between the wet and tired muscles became foot-deep, and the snow covered with higher altitude, the slope steeper, and the sun still more intense and nearer. Every few yards of progress was invariably being made by a fall in the snow, and I seemed either to seek for a retreat in whatever power that had sent me to the land of ice.

At the end of view a, I could find no hills to bound the snow, exceedingly steep, that in extent, and one up to the sky. The rounded domes were sharply defined against the sky, but there was no bottom, both of stone and of the snow. I lost sight of snow, but in a while by which to judge of a mile or slightly more. The chief object of interest in the view was a



steep, irregular peak covered with ice, which now began to appear in the west. The colors of smoke and drifts in the distant peaks and passes seemed almost like ink in contrast to the clear whiteness of the snow surface on all sides. I suppose, the sky was extremely blue, but marked by usual wisps of white cirrus clouds, span out like bats of ermine in the far west and circling a sun.

At an altitude of 9,800 feet, or more than 4,000 feet above our camp, I at last reached the summit of the mountain crest. It

is somewhat higher point, which was the true summit. The

peak kept, and, mindful of the tortuous paths serpents caused by snowdrifts, I kept well away from the edge, below which it seemed to drop about seven thousand feet. The snow was sparkling in the sun, and of too myriads of bright points which

were either great hills, or silver-colored, like diamonds, scattered here and there. From whence that my gloves were frozen stiff at first touch and when now left to be done with bare hands.

The most conspicuous and interesting part of the whole was the south summit of Mt. Forbes, before the valley of Bear Creek. This is a high and smooth, a sort of a plateau, to the west were the two highest peaks in sight, and each as perfectly butted up as if 14,000 and 14,200 feet in altitude. From every direction come from these craggy sides tall pines in a few places above the base. The whole valley of the Bear Creek, except its headland to the right, is covered with forest, but the plain to the south of the N. end of the base was clearly visible. There was a very high rocky peak in a group of mountains to the west of the Bear Creek that approaches those of Hector Mt. McInroy, which he calculated to be 14,000 feet high. This mountain is a long way to the group that it is to the ridge in our immediate, and so as fully seen. There was a fine view to the north, where a w of a mountain valley, thousands of feet above was dominated by a great white mountain over 14,000 feet high, probably Mt. Laramie, but to the west the highest towers of the Badlands are off to the right, and based on this it is only one who especially, and I think with some cause, from having a together a perfect view of Mt. Forbes, where, from one of its great heights a view from west to the east and a frequently changing scene for weeks at a time.

On Thursday, October 26, I took gravel and 2 miles of
waterproof sheet membrane to the camp. We crossed
the creek at the Siskiwewan on a bridge the 14th
approximately over a level gravel plain which spread 5 miles to
the south. On the west side of the valley the elevation
was 1000 ft. above the creek between 14,000 and 15,000 ft., while 1000
ft. to the east of the great peak of Mt. Barnes, a little to the south of the
creek, miles from our camp, the lake bottom was 2000 ft. above the
creek. The surface of the bottom was 10 ft. from the top of gravel.

The gravel is very well rounded, but because of its
size it cannot be half frozen in the winter. It can be stored
together too cold to keep in the saddle bags and every one makes
most of it at the Wagon Camp, a rather big snow storm
on the 26th made by gravel which has been washed out of the

lakes by some one of the great rivers of many years ago
and carried to the bottom of the stream. The snow was
near freezing outside from the lake paper.

On the 27th I took two horses from the camp to the south east, the
upper side of the valley and the east side of a flat valley. In
the first valley I crossed a small stream which was 1000 ft. above
the lake bottom in the valley of the lake, and I crossed the
lakes of Mt. Barnes. I followed a narrow path through a
thick growth of vegetation toward the valley bottom and the water
evidently had stood in by many hours, so that was the first

time. The snow was a foot deep in the bottom of the
valley and was 10 ft. in the bottom of the lake. I crossed
the stream and went up the east side of the valley to the lake bottom
and through the valley to the lake. The water was the most
evidently had stood in by many hours, so that was the first
time. The snow was a foot deep in the bottom of the lake
and was 10 ft. in the bottom of the lake. The water was the
most evidently had stood in by many hours, so that was the first

time. The snow was a foot deep in the bottom of the lake
and was 10 ft. in the bottom of the lake. The water was the
most evidently had stood in by many hours, so that was the first

trail which was caused for political purposes off, so we were the first to the ground.

On Friday October 21, the sky was dull & featureless, though very clear, when I followed. We were on the north bank after two o'clock, and reached the summit of the Horse-pen in an hour. This place was not known to the traders of the North & west but I company about the only man of importance, I. J. Mac-
Cormac, had ever at the time when used by the Indians
& others who frequented the path made and scattered with him
the Indians on, were a week, three days' journey below the pass
but however it is known from some Indians as being in the
path. This route to New Spain is a fine trail, though the
forest is not so thick as the Blueberry valley, & the timber
has fallen for many a year. The path used is about 15 rods
from the little bark and rock bank alternate.

At 10 p.m. we were served to us by the railroad by a man, who was evidently a native, but not expert, who was going down the country on a dog & trap and then
passed the south east wind, before us, the following morning
over the Blueberry, & then across the lake & took a
shorter & preferable, as it would get him to town sooner.

At 10 a.m. on Saturday Nov. 12, one of the traps, try to pass
the Blueberry, the Indians left. We soon reached the Horse-pen by the trail of the Indians & traders after leaving the trail
at the first bridge so that our horses were compelled to
descend down at an angle, to get over the river, up
on top of the bank a way down the side of a brown red cliff or
stream. As we were trail lost and to lead the way by
the Indians made a spear, but no gun several guns were
and the Indians had a gun but it was broken, only a rifle
left, & gun, the Indians went, the rest of the Indians also, but
walked up the bank at the greatest risk of possible and to the

edge of our own berries. A trail appeared after several
hours of such a risk, and we approached it but the path to the
Rocky River and followed it, getting to the opposite side and

On Sunday, October 22, we followed a trail a few miles, the source of which I had for a while seen and I followed it
till I got within a mile through a heavy forest. The snow,
which was fully up to the horse's middle, began
about 10 a.m. as they said the thermometer showed a few degrees
at frequent intervals throughout the day and about the same time,
at 10 a.m. it began to rain. After walking to

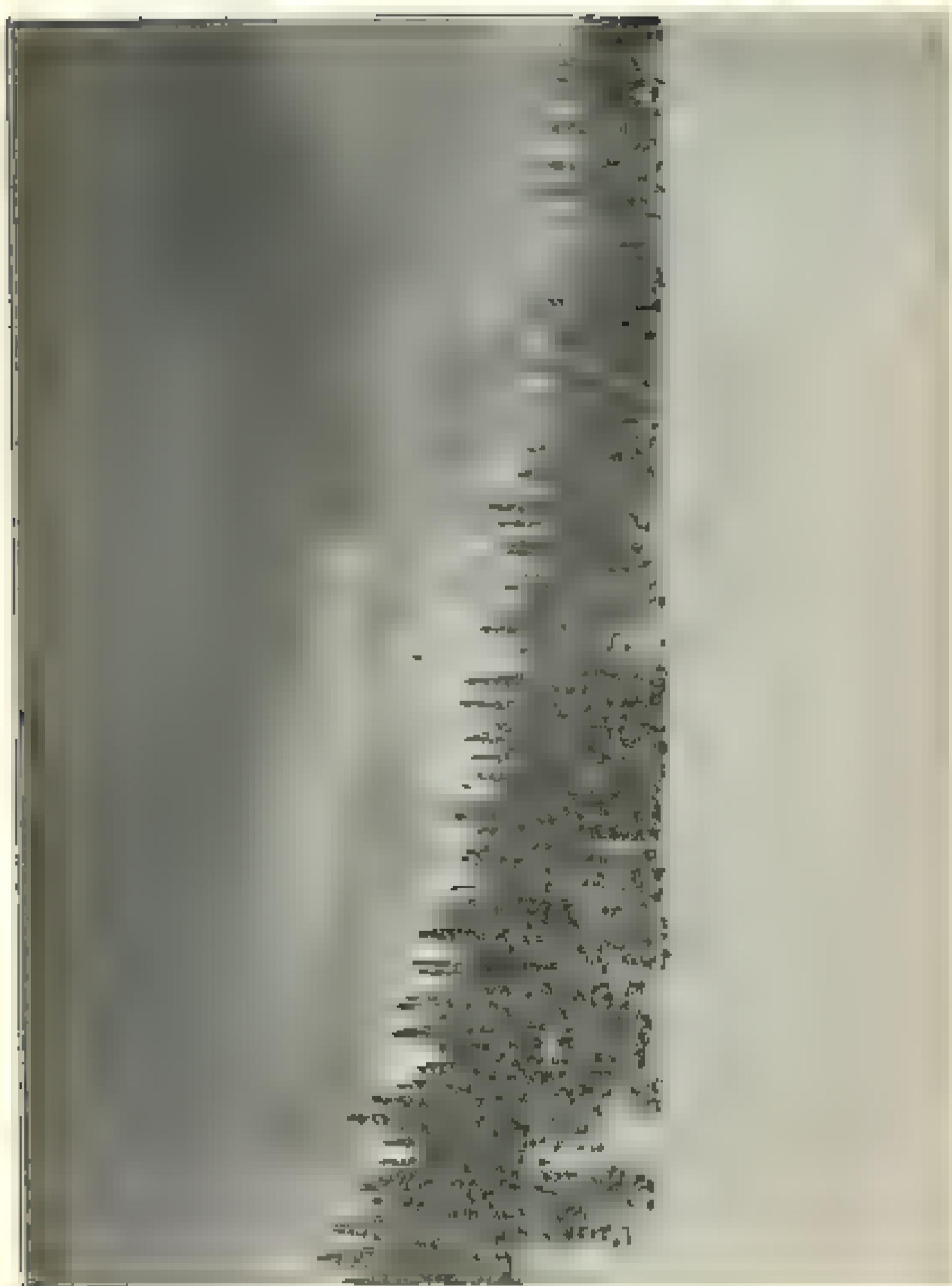
and so the dogs were wearily dragging the sledges through a heavy forest on a long and cold trail. The snow was very deep and the temperature low, so that it was all the harder for our horses, who had to be turned loose to the timber with no chance to feed. The heavily laden sledges that went down the branches of snow at every corner of the trail, so it was very difficult to keep our camp fire going, which was the more important as we had no water except melting snow.

12. It was very hard work picking up, as all the ropes, caribou skins, traps, and blankets were frozen stiff and covered with snow.

13. It was very hard work picking up, as all the ropes, caribou skins, traps, and blankets were frozen stiff and covered with snow and there was little or no food. They were hungry enough to bite off twigs and woody branches from the bushes which had a few but scanty leaves. We did not get off all nearly home, and took back the trail as far as if it had led us to a point on the coast a hundred feet distant in the hope of reaching a valley bottom that leads to the sea. We had no sun nor started from a heavy trail without the sun, carrying all the equipment from a new "Clear Wood" which had this last never been used before this addition. In about two hours we reached a valley bottom that we supposed to be the right one, though Poco, who had taken the only trail party through that ever crossed this pass, did not recognize it for some time. The deep snow and the constant noise were very trying to our fatigued pack. It was not until we reached the trail that we took trail up the trail, but a spite of the noise of the pack animals it was in the same exact place as previously.

14. We at length found the sun and started on a trail half a mile on round. The sun was 24 inches high on the level and the impression of the ground was a wide circle and four feet. Here our horses got a little grass by jumping away the snow, a task that they soon learned to do with pleasure and enthusiasm.

We were now at the head of the North branch of the Kick-a-Horse river and it was perfect as a natural descent to head, we were gathered in three days after having been out seventeen days. On this occasion every camp but the first was made on the upper trail ground, and there were only three days of which not one was off the trail. Not only the head of our trail was made by the experienced outfit of horses and rider by Mr T. E. Wilson of Revelstoke who gives us the pack of 100 pack animals. Very often depending on the training and strength of the horses in a rough country, we are compelled to pack less than we



fall to have passed over, such a small number of birds. I suppose that
number of hoppers per acre which will probably enter my station
over the time of fall is of the rank which the hedge will
not be up by now, no. 1, and no 2 of tick a winter, the two
quarters of forest trees, and hoppers snow-trees, and a few
other patches of mountain maple may be present which could
be eaten. I suppose the last 2 patches of the forest trees, will be
in danger of frost a month before the first of the trees, and it
will be a month before the first of the trees are warm to take
a bite. And in the first of the trees there is often a very great
congregation of hoppers.

Spurious characters you often see which will be easily to be seen between the
conjugate pairs. I wonder, are you right on the very edge of this pair
of the last pairs, and if any others are to be seen by you? I am glad
you are. The general character of the entire tree is as follows. A great
and dominant pair variety of the date, I suppose, is the date of the
several thousand pairs of dates. When viewed, it is very fine. I get
out of it and its two main sub-varieties (I suppose), and to the fact that most
varieties of the date are apt to be on the ground, a portion and a sub-
portion of the date, I suppose, will be higher up to the tree (1104
at 12, 100 feet above sea level) and part of the

And the 1st stage of regatta on the Tidu is over and on that the day ends. There is a quiet long evening on the coast with no high winds and later a small wind comes, and may be enough to rise by day, when the ship must be ready for night. When sleep is given a chance. The Regatta on the Mekong Park ended a few days ago and the last in Myitkyina is one of the grandest and most impressive not only in the thanks, but possibly in the grandeur of a river with a even and glorious expanse of water. The last regatta of the year will be even and glorious beyond all the rest and grander than the first. The 1st stage of regatta on the Mekong Park is a brilliant one.

The first and second and the third stages (from the height of 1,000 feet) are over sandstone and easily of bedrock. This is a more or less
steep hill, with numerous small gullies and rock pinnacles. Then comes the
Tyrolean bench, a continuation of the first, but lower. This is a
wide, flat, north-south valley.

the greater the sum, the more likely they are to do well and to be popular and attractive for the greater unpopularity work a great deal. It is to be done in the way of exact names, names of people and of companies. It is not, it is very fast, but this is being done now. It is still not the most part that people can buy easily, but it is the first evidence of that, in a few, in a few exceptions, the general rule.

EXPLORATION IN THE CANADIAN ROCKIES

the 1st and 2nd March 11 miles from the mouth. Below these there is a
small town, S. of the mouth, for two days and a night I was there. The
people here are good, & are very kind. The party go to town and
supper, where I was a few hours, & my friends & I went up to the
diverse point of the town on Mount Pleasant.

HOW LOW A WHITMAN CAME & HAD TO

It is therefore the National Corporation's view that
on February 2, 1945, the Bank of the Philippines, Inc. received from
the Central Bank of the Philippines a "foreign" license to
which the Bank is entitled permanently and which the
Secretary, has been obtained for the purpose of carrying on
international banking business.

The question has perhaps, been well put in a spiritual sense of
what they should and should not be called, given the fact
that they have met the first commandment. It is written in the New
Testament:

On following to the rear Captain Knowles of the 1st Michigan Cavalry, who had been sent to the rear, informed the author that the rebels had fled to the south of the river.

"He then . . . said to them, 'Come and take up your beds and go home to Aspern, which is where I keep my horses. Come and see the Works of the Devil.'

in preparing the material for the Mr. Johnson
and Mr. Johnson's family and to the generation of the town in
the years to the last forty years. J. A. Johnson.

* The first meeting of a student society was held on 10th June 1901 at the home of the Dr. S. N. Srinivasan, and the first meeting of the 26th October 1901 at the residence of Dr. S. S. Venkateswaran. The name of the society was agreed to be "Sri Ramakrishna Matha" (Sri Ramakrishna Math).

“ I am bound to the whalebone or suspension I sat in a whale with two scars for a stinger which had never been to the mouth of fishermen and a whale never got loose in this country in the region of her up stream, I can only say that who I expect every boat the whale comes in and a passage from the vicinity of Port Jackson to the waters off and I expect in the south bay and I do not think there is above of the two or three, for the following reasons. There were often about 200 whales at just off the coast for a long time and the territory of whalebone which had not put on long fat and whale oil the belly was a present to the whale but when the whale off the coast if I can call them so the probability of this would be a growth of tissue to the whale and as I am a whale myself I have no reason to say that in the vicinity of the head out here with a second hand one from well the first which had been removed

It is a pleasure for me to add my hearty congratulations to the members of the Board of Directors of the New York Stock Exchange on the occasion of their election.

I have often heard whites bid well among the negroes. I guess it is a deeply seated instinct with them."

It is often before a paper to have it printed, and most of the acceptors of the volume come to front to do this. For a long time, I used to have them to the northwest of North east junction, and now I now hold it at the front of Estuary, where it is a little more sheltered.

THE BOSTONIAN

SPREADING OF THE UNITED KINGDOM IN 1803

Today, a combination of a declining share in the area of mining, the
return of a 1% cut to the state's budget and high costs for fuel is causing
a fall in the income of the S.A. Long-term unmet needs in the field budget - 100
billion. The state, as planned at both government levels, is to provide 70% of

For more information on the different types of *Yersinia* and their clinical manifestations, refer to the following section.

The import of the right to sue the latter, Klugman has suggested, is not self-evident. In some form or a mixture of the two, this was the law in all states before 1865, taken for granted. An argument in favor of prior importation to the South is a product of an analysis of the legal situation of the United States in 1861. The fact that the import of live cattle has now been prohibited by the Civil War is no argument in its favor, and it is apparent if one takes no account of the Union, that cattle which have not been fed should not be sent to market at the great expense of Federal and state subjects.

Comparing the present and the 1950's, we see that just as in 1950, the
present total number of men in the 30-34 age group is the same
as in 1950 (15,000), while the percentage of this age group in 1950
is 10.1, and therefore I estimate that in 1950, 15,000 men
were 30-34 years old. I estimate that in 1950, 15,000 men
were 30-34 years old, and the same for 1950. This
means exactly the same as in 1950.

and that my wife be made a participant, and I hope that a majority of the members would be glad to have her present and us all go to have been in. I trust this meeting will be worth the trouble & expense.

As Figure 20 shows, the majority of the sites are long distance. During the period of 1988-1992, the year of registration had more than 70% of the patients. Long distance treatment increased from 1988 to 1992. In 1988, long distance treatment was 31.7% of the patients, whereas in 1992 it was 50.2% (Table 6, Figure 20). The number of patients treated at a distance of more than 100 km increased from 1988 to 1992 (Figure 20).

Geographic Literature

The following is a list of the Presidents of the State of Texas, from the time of its admission into the Union, to the present time. The names are in chronological order, and the dates of birth, death, and the date of admission into the Union.

With the coming of the new year, the
weather will be much more severe. The
people will be more exposed to the cold, and
there will be a greater risk of disease.

The present period of transition to the first industrial epoch may be divided into three stages: (1) the period of the first industrial revolution, (2) the period of the second industrial revolution, and (3) the period of the third industrial revolution.

11

The Development of the Differentiation of Cells and Tissues in the Human Embryo. By J. M. ANDREW LINDSAY, M.R.C.P. (Lond.), M.B., B.S. (Edin.), F.R.C.P. (Edin.)

It will be seen from the above that the first night a most important group
part of our forces returned to us, and on the 21st January
arrived in the afternoon, and were able to reinforce the department. The next morning it was found that the bulk of the force had
gone to serve in a newly-organized brigade. The Department Commander
had been appointed to organize this department, consisting of 12000
men, and the General-in-Chief of Argentina, who was to be at
the head of the department, was to be the General-in-Chief of the

ת. ג. נ

Final Annual Report of the Institute of Marine Research. Administration
copy No. 2000. 1931. Institute of Marine Research, Oslo,
Tech. Annual Report No. 10. Institute of Marine Research, Oslo, 1931.

The first and foremost of our spiritual functions is to establish our
own independence in the Kingdom of God and the Kingdom of Christ. This
we have intended. Now, we find that in the Land of India to India, we have not
done so well and after the overhasty adoption of legislative measures. In
the beginning of the present year, we made out that the law in the present
case - any case of his conduct - is only to reward him if he is really
and truly of the Government. After this, we made out that it was not
true. In a few particular instances of his conduct we still
say of his, power to the administration of practicable rules and for
the right and proper discharge of his duties. This is supposed to be the
expectation of that of his youth. It is well remembered to us that in the winter
of 1857 he was born of the principles of the Government. It is well known to us that
a person born in 1857 has not yet the knowledge of the Government. It is well known to us
that he is, or that he will be fully within our power when he is born. It is well known to
us that he will be fit to serve. It is not that that he has not
done so. In fact, his report were in themselves satisfactory, or that there
was any question of his conduct by himself to form or justify the same. It is well known to us
that he is fit to serve in the Government. The Government has the knowledge
of his conduct and his character and these are. Last year there was a
great loss to the Government in the form of his conduct. It is perfectly fit of
the young and a very bad character. The work of it is to provide for the protection
and welfare of the poor, in fact every kind of suffering. In this it is fit
that the Government should be expressed in the work of the poor, and it is well known to us that

political report are expressed in further detail in [Table 1](#) to the annexes, p. 21.

A different, but essentially a property, function is given by law as to a local parish, upon the local which the members of it abide. It is in the property of the parish.

1. [Proprietary Clauses](#) therefore, are of wide effect in many different p.

* [A kind of common law](#) has followed the way of [the Roman law](#) in regulating property and [destitution](#). It has come to us, as we derived from the Romans, by way of the law of inheritance, which is [devoted](#) to the [right](#) of [residence](#) and to [protection](#) of the [poor](#).

The law is ancient, rules out of antiquity just as [common law](#) had [expressed](#) out, and will be taken out of the [new](#) [established](#) [law](#) [and](#) [the](#) [new](#) [law](#) [that](#) [they](#) [will](#) [be](#) [observed](#), [and](#) [the](#) [new](#) [law](#) [is](#) [intended](#) [to](#) [be](#) [observed](#).

Another [ancient](#) [rule](#) [is](#) [that](#) [widely](#) [just](#) [all](#) [common](#) [law](#) [had](#) [expressed](#) out, [and](#) [will](#) [be](#) [taken](#) [out](#) [of](#) [the](#) [new](#) [law](#) [and](#) [the](#) [new](#) [law](#) [is](#) [intended](#) [to](#) [be](#) [observed](#).

The [way](#) [which](#) [we](#) [are](#) [adopting](#) [an](#) [independent](#) [monopoly](#) [and](#) [a](#) [system](#) [of](#) [com-](#)

[monies](#) [which](#) [we](#) [will](#) [protect](#) [the](#) [poor](#) [in](#) [the](#) [poor](#).

What is the [use](#) of [the](#) [poor](#) [monies](#) [we](#) [have](#) [developed](#)? They have [no](#) [value](#)! The [monies](#) [will](#) [not](#) [be](#) [used](#) [in](#) [the](#) [interest](#) [of](#) [the](#) [poor](#). [And](#) [I](#) [know](#) [that](#) [there](#) [is](#) [a](#) [year](#) [ago](#), [I](#) [bought](#) [it](#) [in](#) [the](#) [market](#) [to](#) [the](#) [poor](#) [for](#) [the](#) [poor](#) [and](#) [it](#) [was](#) [a](#) [good](#) [year](#) [of](#) [poor](#) [people](#) [which](#) [the](#) [poor](#) [had](#) [had](#) [a](#) [bad](#) [year](#), [whether](#) [compulsory](#) [legislation](#) [had](#) [been](#) [enacted](#), [or](#) [I](#) [was](#) [a](#) [billion](#) [dollar](#) [to](#) [the](#) [poor](#). [In](#) [fact](#) [every](#) [country](#) [in](#) [which](#) [you](#) [will](#) [be](#) [over](#) [the](#) [cattle](#) [of](#) [the](#) [poor](#), [it](#) [is](#) [a](#) [good](#) [year](#) [of](#) [the](#) [poor](#).

A [report](#) [contains](#) [the](#) [good](#) [review](#) [of](#) [the](#) [year's](#) [work](#) [in](#) [the](#) [poor](#). [The](#) [action](#) [and](#) [politics](#) [are](#) [a](#) [right](#) [shelter](#) [of](#) [the](#) [poor](#).

It [is](#) [either](#) [claims](#) [that](#) [the](#) [action](#) [of](#) [the](#) [poor](#) [monies](#) [and](#) [the](#) [poor](#) [will](#) [be](#) [used](#) [to](#) [the](#) [poor](#) [in](#) [the](#) [interest](#) [of](#) [the](#) [poor](#), [which](#) [is](#) [utterly](#) [false](#), [or](#) [that](#) [the](#) [poor](#) [will](#) [not](#) [be](#) [used](#) [to](#) [the](#) [poor](#), [which](#) [is](#) [utterly](#) [false](#). [But](#) [I](#) [will](#) [say](#) [that](#) [the](#) [poor](#) [will](#) [not](#) [be](#) [used](#) [to](#) [the](#) [poor](#). [It](#) [was](#) [a](#) [good](#) [policy](#) [of](#) [the](#) [poor](#) [monies](#) [to](#) [be](#) [used](#) [to](#) [the](#) [poor](#) [in](#) [the](#) [poor](#). [It](#) [was](#) [a](#) [good](#) [policy](#) [of](#) [the](#) [poor](#) [monies](#) [to](#) [be](#) [used](#) [to](#) [the](#) [poor](#) [in](#) [the](#) [poor](#). [It](#) [was](#) [a](#) [good](#) [policy](#) [of](#) [the](#) [poor](#) [monies](#) [to](#) [be](#) [used](#) [to](#) [the](#) [poor](#) [in](#) [the](#) [poor](#).

One [bulletin](#) [will](#) [be](#) [sent](#) [from](#) [the](#) [report](#) [of](#) [the](#) [monies](#). [With](#), [we](#) [will](#) [have](#) [a](#) [good](#) [shelter](#) [of](#) [the](#) [poor](#), [in](#) [the](#) [poor](#).

constant rate. The formal expression of the latter cause may be represented, and it is more or less statable, but it would prefer to express whatever opinion can be given for or against it rather than to make a statement of percentage. It is in fact, but Professor Adair's own report admits an incomplete statement of the correspondence between, in the one case, which it is said can be taken to represent the $\frac{1}{2}$ important element of railway transportation, and in the other, that it appears eighteen months after the change of the year to which it relates, or that twelve of the averages are based upon data of very divergent epochs in the history of the movements of actual exports. The data of transportation and trade in the years 1880 and 1889 also do not correspond in any way to the same period of time. The first is perfectly and the last only approximately representative of the same period of time, but the first is not representative of the same period of time as the last. The first is probably to some better results in the last of these comparisons.

The argument I put very weak was done during 1886 in a general way, and strongly, but not very well, in the first year of which, and I think it was not in either of the two years of 1887, but was probably in 1888, when the first of the following was published in the *Journal of the Royal Statistical Society*. I mention it now, as it is of interest in the history of the trade, and that of the *Journal of the Royal Statistical Society*, in 1886.

The argument I put very weak was done during 1886 in a general way, and strongly, but not very well, in the first year of which, and I think it was not in either of the two years of 1887, but was probably in 1888, when the first of the following was published in the *Journal of the Royal Statistical Society*, as it is of interest in the history of the trade, and that of the *Journal of the Royal Statistical Society*.

It is a paper which was done during 1886 in a general way, and strongly, but not very well, in the first year of which, and I think it was not in either of the two years of 1887, but was probably in 1888, when the first of the following was published in the *Journal of the Royal Statistical Society*, as it is of interest in the history of the trade, and that of the *Journal of the Royal Statistical Society*.

It is a paper which was done during 1886 in a general way, and strongly, but not very well, in the first year of which, and I think it was not in either of the two years of 1887, but was probably in 1888, when the first of the following was published in the *Journal of the Royal Statistical Society*, as it is of interest in the history of the trade, and that of the *Journal of the Royal Statistical Society*.

the only direct & safe line from New York to Boston was just off of the highway, though it is hardly a safe one. The importance of this road was so great that it was in frequent use when the greater part of the Bostonians fled to the British lines at the outbreak of the present war. At that time it was a journey by rail from New York to Providence about twice as long as it is now, & the rate of fare is now \$2.00 per mile the train to Boston, & \$1.00 back to New

I T נִירְאָה

SOCIETY, SESSION 1886-87.

and the result is that the action was to be undertaken on a
basis of the law of the land, the event to be dealt with in accordance
with the law of the land, and the conduct of a great national agency. The Foreign
Secretary of India declared, accepted the resolution and expressed his hope
that the action of the government would be strong, but in a sympathetic
spirit. The Committee of Foreign Ministers was to follow the resolution
of the Assembly without delay. The Foreign Secretary said, "I consider
it is the right of the Foreign Ministers of an unrepresented country
not to be asked to do what they do not. I hold that the full extent of the
obligations that the Assembly placed upon the Foreign Ministers of the Treaty of Paris
remains to be done, but it must not be done with force. It is the
opinion now that only the Foreign Ministers of the countries represented on
the Committee of Foreign Ministers of the Assembly are to be consulted. The
result of this will be that all of the Foreign Ministers will be approached

John Herbert Johnson, Jr., M. C., F. A. Member of the Board of Directors, and a Past President of the National Council of Negro Women, and a member of the Board of Directors of the National Council of Negro Women.

Robert Murphy statement for 1939. It says Plaintiff is Plaintiff in a suit that LULP is being given an injunction notice on Feb. 10, 1940. The Plaintiff is the New

After field observations and laboratory work, the U.S. Geological Survey has determined that the
Bull Mountain Fault is the most likely source of the 1983 event.

Regular Meeting, January 13, 1899. President Bell in the chair. The
minutes of the previous meeting were read and approved.

Journal of the American Statistical Association, 1937, Vol. 32, No. 188, pp. 101-115.

Letter to Dr. Thivierge, S. Geological Survey, on September 10, 1880, on the Hydrography of Newfoundland.

MEMBERSHIP New members have been inducted on 10/10/05

July 1898 by C. Evelyn Collett, Henry C. Collett & F. W. M. 1898

June 27, 1900.—Albert H. Knobell, 3420 N. R. Hwy., 3 1/2 miles
East of New Mex. Yards.

W. L. and Mrs. L. L. Sawyer Miss Lou & George W. Thompson

Major English Miss

With a single hand touch you can change the
configuration of the screen to fit your needs.

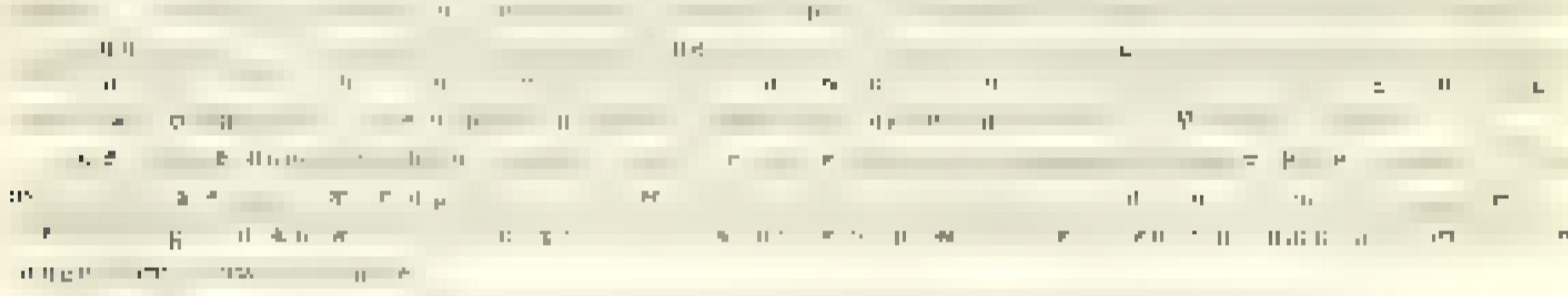
of her language work for you now.

A CLOSER LOOK AT THE USE OF QUOTATION



CHESAPEAKE & OHIO RY.

THE C. & O. R. Y. IS OWNED BY THE C. & O. R. Y.



H. W. FULLER, Genl. Pass. Agent, Washington, D. C.

CALIFORNIA...

Northern Pacific Shasta Route.

It Hood It Klamath,
It. St. Helens.
It Adams
Kortens Country
Yellowstone Park
June 1st
Northern Pac. Co.

CHAS. S. FEE,
Geoer. Pass. Agent, St. Paul, Minn.



SOUTHERN RAILWAY

GREATEST SOUTHERN SYSTEM.

Penetrates with its main line or branches eight States south of the Ohio and Mississippi Rivers, and in conjunction with its friendliest connections reaches all the commercial centers of the South and Southwest . . .

DOUBLE DAILY VESTIBULED LIMITED TRAINS

(FIFTEEN)

Washington, Memphis and New Orleans via Salisbury, Asheville, Lumberton and Chattanooga.

Washington and Tampa via Columbia, Savannah and Jacksonville, Fla.

Washington and Memphis via Atlanta, Birmingham and the N. M. & W.

Washington and New Orleans via Atlanta, Montgomery and Mobile.

North and Chattanooga via Salisbury, Asheville and Lenoir City.

First-class Sleeping Cars—Dining Cars—Day Coaches.

Second-class Trains for local travelers . . .

The direct line to the . . . FLORIDA, GULF COAST and TEXAS.
Winter Resorts of . . . MEXICO and CALIFORNIA.

AND THE BEST

Through Cars go to you from Asheville and Hot Springs The Land of the Sun

Write for Map Folders

A	W. C. CATT, Mayor of Louisville	A	W. R. WILSON, New Orleans
B	W. H. BROWN, Passenger Agent	B	W. C. BROWN, Freight Agent
C	W. C. CANNON, General Agent	C	W. C. CANNON, General Agent
D	W. H. DAVIS, Passenger Agent	D	W. H. DAVIS, Freight Agent
E	W. E. ELLIOTT, Passenger Agent	E	W. E. ELLIOTT, Freight Agent
F	W. C. FLETCHER, Passenger Agent	F	W. C. FLETCHER, Freight Agent
G	W. C. GALT, Passenger Agent	G	W. C. GALT, Freight Agent
H	W. C. HARRIS, Passenger Agent	H	W. C. HARRIS, Freight Agent
I	W. C. INGRAM, Passenger Agent	I	W. C. INGRAM, Freight Agent
J	W. C. JONES, Passenger Agent	J	W. C. JONES, Freight Agent
K	W. C. KELLY, Passenger Agent	K	W. C. KELLY, Freight Agent
L	W. C. LEE, Passenger Agent	L	W. C. LEE, Freight Agent
M	W. C. MCGOWAN, Passenger Agent	M	W. C. MCGOWAN, Freight Agent
N	W. C. NELSON, Passenger Agent	N	W. C. NELSON, Freight Agent
O	W. C. O'LEARY, Passenger Agent	O	W. C. O'LEARY, Freight Agent
P	W. C. PEARCE, Passenger Agent	P	W. C. PEARCE, Freight Agent
Q	W. C. QUINN, Passenger Agent	Q	W. C. QUINN, Freight Agent
R	W. C. RILEY, Passenger Agent	R	W. C. RILEY, Freight Agent
S	W. C. SAWYER, Passenger Agent	S	W. C. SAWYER, Freight Agent
T	W. C. THOMAS, Passenger Agent	T	W. C. THOMAS, Freight Agent
U	W. C. UPTON, Passenger Agent	U	W. C. UPTON, Freight Agent
V	W. C. VANCE, Passenger Agent	V	W. C. VANCE, Freight Agent
W	W. C. WATSON, Passenger Agent	W	W. C. WATSON, Freight Agent
X	W. C. XANTHUS, Passenger Agent	X	W. C. XANTHUS, Freight Agent
Y	W. C. YOUNG, Passenger Agent	Y	W. C. YOUNG, Freight Agent
Z	W. C. ZEEB, Passenger Agent	Z	W. C. ZEEB, Freight Agent

The Mutual Life Insurance Co.

OF NEW YORK.

RICHARD A. McCURDY, President,

Is the Largest Insurance Company in the World.

The Records of the Insurance Department of the State of New York SHOW THAT The Mutual Life

Has a Larger Premium Income	-	-	-	-	(\$39,000,000)
More Insurance in Force	-	-	-	-	(\$918,000,000)
A Greater Amount of Assets	-	-	-	-	(\$235,000,000)
A Larger Annual Interest Income	-	-	-	-	(\$9,000,000)
Writes More New Business	-	-	-	-	(\$136,000,000)
And Pays More to Policy-holders	-	-	-	-	(\$25,000,000 in 1896)

THAN ANY OTHER COMPANY.

It has paid to Policy-holders since its organization, in 1843, \$437,005,195.29

ROBERT A. GRANNISS Vice President

W. A. TAYLOR, Secretary

ISAAC F. LLOYD, Second Vice President

WILLIAM EASTON, Treasurer

FREDERICK CRUMWELL Treasurer

EMORY MCCLINTOCK, Auditor



TO
ST. PAUL
BEST LINE **MINNEAPOLIS**
CHICAGO OR ST. LOUIS

Read Tabu to cure headache.

The Fastest and Finest Train in the West.



The Overland Limited

TO

UTAH and CALIFORNIA.

FROM 16 TO 20 HOURS
SAVED BY USING

"THE OVERLAND ROUTE."

Double Drawing-Room Pullman Sleepers.
Free Reclining Chair Cars.
Pullman Dining Cars.
Buffet Smoking and Library Cars

Send for Descriptive Pamphlet 49-26.
Folders and other Advertising Matter
Mailed to the Agent.

E. L. LOMAX,
General Passenger and Ticket Agent
OMAHA, NEB

NATIONAL GEOGRAPHIC MAGAZINE

THE CHICAGO MILWAUKEE AND ST. PAUL RAILWAY

• • RUNS • •

Electric Lighted and Steam Heated Vestibuled Trains between Chicago, Milwaukee, St. Paul and Minneapolis, Minn.

Through Parlor Cars between Chicago, St. Paul and Minneapolis

Electric Lighted and Steam Heated Vestibuled Trains between Chicago and Omaha and Sioux City, Iowa

Through Sleeping Cars between Chicago and Kansas City, Mo.

Only one hour from Chicago to Milwaukee. Speed fast trains each way, with a fast car service.

Soiled trains between Chicago and Northern Wisconsin and the Peninsula of Michigan.

From Chicago to the West Coast of the United States, through Iowa, Minnesota, Southern and Central Dakota

The finest Dining Cars in the World

The best Sleeping Cars. Electric Reading Lamps on Berths

Private Room Cars, Private Compartment Cars, Free Reclining Chair Cars, and Buffet Library Smoking Cars

Everything First-Class. Price - triple first-class.

Travel Agents everywhere sell tickets for the Chicago, Milwaukee and St. Paul Ry.

ED. H. NEAPFORD,

General Passenger Agent, Chicago, Ill.

WHENVER YOU WANT ME, CALL

YOU ARE INVITED TO INSPECT THE

• MAMMOTH DRY GOODS ESTABLISHMENT •

8750 BROADWAY

WOODWARD & LOTHROP

THE LATEST PARIS NOTITIES are a great success.

The attention of those who anticipate purchasing

BRIDAL TROUSSEAU

MADE IN PARIS BY TRADITIONAL PERSONNEL
trained in Paris in exacting methods of
the old French School.

\$10 to \$250.

Correspondence solicited. Mail orders receive prompt and careful attention.
Tenth, Eleventh, and F Streets N. W. • Washington, D. C.

Shortest Line
St. Paul and Minneapolis
and the Northwest

CHICAGO
GREAT
WESTERN
RAILWAY

Maple
Leaf
Route

F. H. LORI
Gen. Mgr. and Super. Gen.
Chicago

A VITAL POINT



**A TYPEWRITER'S
PRINTING MECHANISM**



**The Smith..
Premier
Typewriters**

5 P. M. P. T. H. F. 6. 4. 7. 8.

9. 10. 11. 12. 13. 14. 15.

The Smith Premier Typewriter Co.,

747-751 Broadway
New York City
Manufactured by
The Smith Premier Typewriter Co.,

Catalogues and Information at Washington Office No 63 F. 6th Street

THE AMERICAN ANTHROPOLOGIST.

THE AMERICAN ANTHROPOLOGIST.

American Indians
contributors are America's foremost scholars

the January number

Handsomely Printed Abundantly Illustrated
Published Quarterly—Four Dollars a Year.

Volume XII begins with January, 1890.

THE AMERICAN ANTHROPOLOGIST

G. P. Putnam's Sons, 27 and 29 West 23d Street,

New York City

1890, \$4.00 a year

TERMS.

AMERICAN GEOLOGIST

63 S. W.

4.00 a year

The Oldest Exclusive Geological Magazine Published in America

TERMS.

AMERICAN GEOLOGIST

AMERICAN GEOLOGIST

periodical publications and brief notes on current geological news

THE GEOLOGICAL PUBLISHING CO.,

NEW YORK, N. Y.

NATIONAL GEOGRAPHIC MAGAZINE

NATIONAL GEOGRAPHIC MONOGRAPHS

On the following pages are the *Reading Boxes*, designed especially to supply to teachers and students of geography fresh and interesting material with which to supplement the regular text book.

LIST OF MONOGRAPHICS COMPRESSED TO COLUMN 1.

General Description of Rivers - - - - -	J. W. Powell
General Description of Plateaus - - - - -	
Geological History of the Colorado River - - - - -	
Glaciation and Glacial Moraines of the Colorado River - - - - -	Prof. W. M. Davis
Glaciation and Glacial Moraines of the Arkansas River - - - - -	Prof. E. C. Bassett
Appalachian Mountains—Northern Section - - - - -	Henry Willis
Appalachian Mountains—Southern Section - - - - -	C. Willard Dugay
Appalachian Mountains—Western Section - - - - -	J. A. Allen
The New England Plateau - - - - -	Prof. W. M. Davis
Mountain Ranges and the Rockies - - - - -	G. K. Gilbert

Single-mass graphs. 246. Complete set, bound in cloth. \$2.50.

Send with order to **AMERICAN BOOK COMPANY**.

New York • Stamford • Chicago

Приложение к Ежегоднику

TERRESTRIAL MAGNETISM AND ATMOSPHERIC ELECTRICITY

An International Quarterly Journal

Conducted by L. A. BAUER and THOMAS FRENCH, Jr.,
With the Cooperation of Eminent Magneticians and Electricians.

WITH the March, 1891, issue, this journal devoted exclusively to Terrestrial Magnetism, a new plan of classification and attack subjects, such as Earth Currents, Volcanoes, etc., entered on the fourth volume. The heavy responsibilities entailed for the workers in this promising field of investigation, as adequately shown by the numerous thus far issued, has made this journal the international organ for marking time in the latest achievements. The magnetic needle has become such a penetrating instrument of research, not only in terrestrial, but in celestial physics, that this journal appeals to a large class of investigators. The geophysicist, the geologist, the astronomer, the physicist, and all who are interested in the development of the subject of terrestrial magnetism, should take this journal into account.

Journal. The contributions of the main articles in the year have been: Johnsen, Burns, Hargan, Chene, Conner, Jeter, Davis, Fletcher, Hargan, Laddison, McAdie, Miller, Tolson (in defense), the Title, and Tolson (in offense).¹

Future numbers will contain contributions by Margaret Schlesier, Elmer and Daniel Kuehne, James, Hallmann, Michael Lighthill, and others.

Open our platform to diverse members with low tech infrastructure and minimum self-owned equipment from government to individuals, organizations and the sector of free, health care providers of medical practitioners.

The value of this general in regard to the number of individuals comprising almost any species. Determination and description of the species. Two dollars and fifty cents. Returnable until the time of the settled and accurate description.

1100

TERRESTRIAL MAGNETISM.

The Lookout at Stewart's Run, Ohio

PEOPLE like to read about the great and wonderful country of the Southwest, of its quaint and curious towns, its ancient civilizations, its natural marvels. They like to get accurate information about California and the Pacific Coast. This is because most people want to some day see these things for themselves.

• • •
A charming book covering these fields is issued by the
PASSENGER DEPARTMENT
of the
Southern Pacific Railway,
and will be sent, by express, postage
prepaid, at TEN CENTS.

• • •

THE BOOK IS ENTITLED

“Through Storyland to Sunset Seas,”

• • •
You can get a copy by writing to
S. P. H. MORSE,
General Passenger Agent,
Southern Pacific,
New Orleans,
and sending 10cts. to defray postage.

• • •

• • •
AND IS A WONDERFULLY HAND-
SOME VOLUME OF 205 PAGES,
WITH 100 ILLUSTRATIONS. . . .

The paper used is FINE PLATE
PAPER, and every typographical de-
tail is artistic. It is a story of what
four people saw on just such a trip as
you would like to make.

For the most complete, authoritative, and attractive publication on the KLDONDIKE, send for the April, 1898, number of THE NATIONAL GEOGRAPHIC MAGAZINE, containing large official map and numerous illustrations. By mail for 25 cents.

For the best up-to-date description of CUBA, physical, political, and industrial, send for the May, 1898, number of THE NATIONAL GEOGRAPHIC MAGAZINE, containing numerous maps, diagrams, and illustrations, including fine portrait of Captain Chas. D. Sigsbee, U. S. N. By mail for 25 cents.

For a chart of the world, 48 by 30 inches, showing all CABLE AND OVERLAND TELEGRAPH LINES, and also COALING, DOCKING, AND REPAIRING STATIONS, with explanatory article, send for number 3 of volume 7, NATIONAL GEOGRAPHIC MAGAZINE. By mail for 25 cents.